

Comment Response Matrix

#		Section	Comment	Response
Remedial Investigation				
1		3.1, pg 11, P1	Replace 'partition number', which is pretty meaningless, with 'leaching CUL' throughout report.	Edited as requested and added "soil" before leaching.
2		3.1, pg 11, P2	Therefore, the CULs selected for these three COCs are based on a value that is protective of partition transport to surface water via groundwater based on non-potable groundwater in either the saturated or unsaturated soil as appropriate.	Edited as requested.
3		3.1, pg 11, P4	The soil CULs for TCE, PCE, vinyl chloride, bis(2-ethylhexyl)phthalate, cPAHs, and PCBs are so low that compliance with soil CULs for these COCs will be based not on the concentration of these COCs in soil, but in groundwater, which is appropriate because the soil CULs are based on protection of groundwater.	Edited as requested.
4		3.3 Pg 12, P2	Specify the Analytical Method to be used for PCBs.	Analytical method for PCBs (EPA 8082A) and cPAH TEQ (EPA Method 8270 SIM) specified in this portion of text.
5		3.3 Pg 12, P2	It is expected that after the remedial excavations, the groundwater concentration will drop below the CULs at all conditional point of compliance wells.	Edited as requested.
6		3.3, Pg 13, P2	Does 'GW values' mean 'GW CULs'? Achieving RLs won't necessarily achieve CULs, at least not immediately. Could it mean 'GW goals'? Clarify wording, and expand.	Revised text and expanded for clarity.
7		3.3, Pg 13, P3	"As the dechlorination decreases, the groundwater condition will stabilize, and copper and arsenic will re-precipitate out of groundwater as demonstrated by the 2019 groundwater sampling event results." Cite the document that explains what happened in 2019	Cited Shannon & Wilson, Inc. (2021) Post-injection Monitoring Results Report.
8		3.3, Pg 13, P3	"The cleanup values for copper and arsenic in groundwater are based on a local background concentration of 8 µg/L for both chemicals." Cite the document that justifies this	Revised text to reference Boeing Plant 2 as the source for the background data. As discussed with Erin Hobbs on 10/27/2021, we are unable to locate the specific document that provided the background data in EPA's online repository.
9		3.5.1, Pg 14, P2	"The POC demonstrating protection of groundwater shall be established in soil throughout the 8801 property (WAC 173-340-740(6)(b))." In some cases you're not going to be able to meet the soil leaching CUL throughout the property. Instead, you're going to meet RLs and then hope that eventually an empirical demonstration is going to show that soil is protective of groundwater. This should be explained.	Edited text. Added a sentence explaining that the surface paving would prevent infiltration and that empirical evaluation of contaminant concentrations data may be required to demonstrate that CULs are met in groundwater.
10		3.5.2, Pg 15, P1	"However, total cPAHs TEQ across the 8801 property have been identified in groundwater at concentrations that are below detection limits and yet may be above the CUL." How did you identify levels below detection limits?	Edited to read that we are identifying levels below laboratory reporting limits in place of detection limits. Added reference to report that provides the background data.
11		3.5.3, Pg 15, P1	The POC demonstrating compliance for pathways protective of air will be ambient air throughout the 8801 property (WAC 173-340-750(6)).	Edited as requested.
12		5.2.3, Pg 19	To avoid implying that samples will be collected only if there are signs of potential contamination, begin the second sentence with 'In addition,'.	Edited as requested.

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13		5.2.3, Pg 20, Northern Property Boundary – Area 1:	Section talks about taking base samples if signs of contamination are observed. Base samples were already taken, correct? And these would be in addition, IF signs of contamination were observed. Revise text to clarify.	Edited to clarify.
14		5.2.3, Pg 22, P1	"A push-probe rig will be used to collect one base sample below the groundwater in advance of excavation."	Typo removed.
15		5.2.3, Pg 22, P4	"For CULs, but not for RLs, samples will also be evaluated to determine if the statistical test is met per WAC 173-340-740(7)."	Edited as requested.
16		5.2.3, Pg 22, P4	Insert the following sentence: All soil with concentrations exceeding one or more RLs will be removed unless such removal endangers the structural integrity of a building, in which case an engineering analysis will be provided to demonstrate the hazard to the structure.	Inserted text and modified to account for structures that are affecting excavation limits.
17		5.2.5, Pg 24, P1	Sub-slab vapor monitoring will cease when four consecutive events indicate TCE and vinyl chloride concentrations in either both groundwater or and sub-slab vapor samples are below the upper value protective of indoor air for that media.	Edited as requested.
18		5.2.6, Pg 24	"It is assumed that a minimum of one sample from every type of material or every 5,000 tons will be tested." Why is this an assumption? If this is the standard plan, it should not be phrased as an assumption.	Removed "It is assumed that" from the beginning of the sentence.
19		5.3, Pg 24-25	There are 13 wells, it's a little unclear why only the two are called out in this paragraph. It makes it sound like they're the only ones being sampled quarterly. Revise text to clarify.	Revised to clarify that the list of wells included for groundwater confirmation monitoring is included as Table 5.
20		5.3, Pg 25, 2nd bullet	"Total PCBs may also be removed if statistical cleanup requirements are satisfied after a minimum of eight quarters of monitoring per WAC 193-3401-720(9)(e) and (f)." Removed from, analysis? Clarify to specify.	PCBs will be removed from analysis. Text revised to clarify.
21		5.6, Pg 27, 1st bullet	"In addition, PCB aroclor concentrations may fluctuate with the seasons, which could impact declining trends." Replace 'impact declining trends' with 'complicate identifying whether trends are declining. Ecology will determine whether the trend is declining based on all available data. Ecology may decide that additional data are required before the decision regarding trends can be made.'	Edited as requested.
22		5.6, Pg 27, 2nd bullet	"If the maximum concentration of TCE has not declined by up to 80% to 90% within three years..." 80% or 90% doesn't really give a good decision tree, try to clarify decision points, and how they'll be reached to minimize future disagreement.	Revised to clarify decision point (80%) which would prompt consideration of re-injection of the ERD compounds or other stimulate compounds.